

Patrick, J. J. R. *al*  
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# MEDICAL SPECIALTIES,

—BY—

DR. JOHN J. R. PATRICK.

A PAPER READ BEFORE THE

ILLINOIS STATE MEDICAL SOCIETY

—AT THEIR—

THIRTIETH ANNUAL MEETING,

MAY 19TH, 1880.



BELLEVILLE.

ADVOCATE STEAM PRINTING HOUSE.

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GENTLEMEN :—

The rapid development which the many branches of medicine and surgery have undergone of late years, and the literature that each specialty has produced of its own, almost entitle them to the dignity of separate sciences ; but divided as the profession of medicine is among so many different specialties, it would be impossible to separate them entirely without impairing their usefulness, for to be successful in any specialty of the science of medicine requires a comprehensive knowledge of the whole.

But as an *accurate* knowledge of the whole domain of medicine is too vast to be acquired by one mind, specialties have become an imperative necessity to human progress. As it is impossible to draw a line of demarcation between the different specialties, or circumscribe the duties of any of them, it frequently becomes a question of great moment with the specialist when to seek the aid of some co-laborer in another department; and this must be particularly so with the general practitioner, accustomed as he is to receive all cases that present themselves to him for treatment ; and yet the unassuming and honest general practitioner of medicine would not presume that he was as well acquainted with the numerous conditions of the eye as the oculist, or of the ear as the aurist, still many have an abiding faith that they can extract teeth with the old turn-key as skillfully as the dentist can with his specially devised forceps.

The physician is very properly consulted in all cases of structural or functional derangement of the mouth, face and adjacent parts ; but it does not follow that he should treat all cases that are presented to him ; on the contrary, he discharges the highest duty incumbent on him when he takes a specialist in consultation, or directs the patient to some member of the profession who he knows has made such cases a special study.

In former times the general practitioner was constantly required to treat diseases of the teeth, and in some very rural districts at the present time his services are still in requisition. An anodyne or succedaneum was applied to the carious tooth which permitted the



caries in a short time to become a necrosis, the necrosis in most cases extending to the alveoli, producing abscess, and in many cases salivary fistulae, and finally resulting in the loss of several teeth. How different the result would have been in the hands of a specialist! Had such a case been placed in the care of a dentist, the tooth would have been properly prepared and filled, and thus preserved for an indefinite length of time.

In all cases where the antrum highmorianum is affected the dentist should be consulted, for the cause of abscess in this region may be due to an ulcerated fang or anomaly of position of a sound tooth. Obstinate ulceration of the tongue may be due to a slightly crenated tooth, and this crenated condition of the tooth may be due to decay or a minute mechanical cleavage of the enamel; after treating the case for a long time the incautious physician discovers the *fons et origo* of the disorder, and straightway removes the offending member. The ulceration subsides; he feels himself unduly elated; but the more composed physician would have taken his patient to a dentist who would have repaired the crenated tooth and thereby cured the ulcerated tongue by physiological rest without the loss of the tooth.

Otorrhoea, otalgia and gray hair are frequently produced by a morbid condition of the teeth, and whenever those conditions are present, the dentist should be consulted as to the best manner of relieving the sufferer.

It is no uncommon thing for the general practitioner to treat prosopalgia for a long time without giving relief. The causes of this condition of the nerves of the head and especially the divisions of the fifth pair are various; but if the patient is not in an anæmic condition, and is not suffering from malaria, rest assured the cause may be traced to some local irritation. A crowded or carious condition of the teeth is one of the most fruitful causes of facial neuralgia.

A young man of some twenty-five years of age was brought to me by a physician who had been treating him at intervals for several months for facial neuralgia. He was suffering great pain at the time on the right side of his face; his general health was good, in fact, he was a robust, hearty, sanguine man. The physician stated that he had examined his teeth, but could find no defective ones, and desired me to make a more critical examination. Upon doing so I found his teeth large, well developed, clean and even, discovering, however, that he had three molars and one bicuspid on each side in the lower jaw, and two molars and two bicuspids on each side in the upper; I was led to suspect the two first molars on the

lower jaw to be deciduous, although to all appearance as to size and sharpness of outline, they were permanent. I questioned him as to symptoms in the lower jaw preceding the neuralgic pains of the face; he stated that while he felt no pain in his teeth, a few days before the pains commenced he felt that it produced an agreeable sensation to close his teeth tight together; further than this he experienced no trouble with his teeth. I concluded to extract the two suspected deciduous molars—they were mere crowns held tightly between the first permanent molars and the first bicuspid. They were the second deciduous molars developed to an extraordinary degree. I saw the patient one year afterwards; there had been no return of the disease; the wisdom teeth on the lower jaw had made their appearance, and the space left by the removal of the teeth had nearly closed, leaving no room for the undeveloped bicuspid which remained in the alveoli, arrested in their growth, caused by the solidity and long retention of the deciduous molars.

So far as my observation extends, it is the common practice of the general practitioner of medicine to treat facial abscess with a cataplasm or a fomentation, and strange as the statement may appear, it is difficult to find a physician who will defend the rationale of such treatment; for there is no surer means by which a simple facial abscess could be converted into a complete fistula. This is especially the case when the abscess originates in the alveoli caused by periodontitis.

A very remarkable case of this character which I have recently had under treatment will serve to illustrate the pernicious practice of poulticing the face in cases where inflammatory disturbance is confined to the cavity of the mouth: On the 6th of January, 1880, a young lady, aged nineteen, was brought to my office by a physician with the request for me to examine her mouth. Upon removing the bandages from her face, a fistulous opening was exposed externally at the site of the relation of the facial artery with the inferior maxillary on the left side, from which there was a free discharge of purulent fluid which gave off an odor peculiar to decomposed bone. The tumefaction of that side of the face was considerable, and great inconvenience was experienced in articulation; the lowering of the jaw was painful and at times impossible.

A small silver probe passed upwards through the external opening ran freely in the direction of the coronoid process, indicating that a sinus had been formed from the parotid gland to the external opening; removing the probe and again introducing it in the direction of the internal angle of the ramus, where I expected to find



the cause of the diseased condition of the jaw, it came in contact with movable fragments of bone.

I at once resolved to open the jaw and remove the diseased bone.

After using considerable force in opening the jaw, I found the gums much swelled and the teeth on the left side all loose and bathed in pus. The left inferior wisdom tooth was found under the gum directed from behind forwards, its roots corresponding to the base of the coronoid apophysis, and the crown resting against the second molar, upon which it must have exerted a strong pressure during its development. Removing the wisdom tooth and several fragments of the internal angle of the ramus, my attention was directed to the parts adjacent; finding that pus had burrowed along the outer wall of the jaw forward, having its exit at the mouth of a sinus near, and a little above the mental foramen, I passed the probe through this sinus, backwards, and found it to connect with the original seat of the disease. Introducing a small lancet at the opening, I opened it back to the anterior angle of the ramus, revealing the condition of the external superior body of the jaw which was found to be exfoliated. Upon lifting up and removing the exfoliated plates of bone, the exterior, or buccal portion of the fangs, of the first and second molars were exposed to view.

Leaving a border of gum closely adherent to the necks of the teeth about three lines in depth and continuous with the gum surrounding the teeth, and cleansing the wound thoroughly with a solution of carbolic acid, glycerine and tepid water, I packed a roll of cotton saturated with carbolic acid and glycerine into the sulcus, and dismissed the patient for the day. Repeated the same dressing daily, when on the fourth day readily removed a small detached portion of the anterior angle of the ramus. From this time the tumefaction gradually subsided, and the patient enjoyed a comparative amount of comfort, being under the constant care of her physician, who continued the dressing each alternate day. As the molar teeth were quite firm in their sockets after the inflammation had subsided, although the septum alveolus was involved in the general disease, I postponed their removal until the lesion at the internal angle of the ramus had assumed a healthy condition, for the retention of these teeth formed a valuable auxiliary in the use of the wedge to guard against the immobility of the jaw, consequent upon the formation of inodular tissue, which character of tissue is invariably produced when lesions of the mucous membrane have been subjected for any length of time to inflammatory action. For this reason the patient was instructed to use the wedge frequently during the day, and report to me for examination twice each week.



On the 10th of March, finding the process of repair nearly complete at the anterior angle of the ramus, and the mobility of the jaw perfect, I removed the molar teeth that were involved, and cut away the lingual wall of the alveolus embracing them; thus permitting the gum that covered the lingual wall to be used as a flap to cover the exposed bone, to be united with the residue of healthy gum on the buccal side, and the detached inferior portion of the buccinator muscle. The external fistulous opening was closed by the application of a circle of collodion as soon as the internal condition showed signs of repair. All dressings were discontinued with the exception of a simple collutorium composed after the following formula, used in the proportion of one teaspoonful to eight ounces of water, as often as seven or eight times during the day:

R	Glycerinæ . . . .	℥ jii
	Acid Carb. . . . .	gtt. jv
	Tinc Myrrhæ . . . .	℥ jii
	Tinc Cardamom. . . .	℥ ji
	Aqua Rosæ . . . . .	℥ v

On the 2nd day of April the patient was dismissed with instructions to continue the use of the wedge, using the collutorium, exclusive of the carbolic acid, and to use a brush in cleansing the teeth after eating.

The early history of this case, as stated to me by the patient, is as follows: Early in the month of August, 1879, she was afflicted with a severe pain on the left side of her face which lasted for a few days at a time, and then subsided, only to return at irregular intervals. She consulted a physician who immediately applied a hot flax seed poultice, and this treatment was repeated during the first two months, or when the inflammation was excessive. Finally suppuration commenced and the external opening in her face was produced. The application of the poultices was still persisted in, and while she did not suffer as much pain as at the commencement of the treatment, the condition of her mouth became unbearable. On the 25th of November, finding no improvement in the condition of her mouth, and despairing of further relief under the treatment of the first physician, she sought the advice of a second who brought her to me. It is useless to trouble you with further particulars concerning this case, except to express my opinion that had this patient been taken to an intelligent dentist in the first instance, the mouth would have been properly examined, the cause of the disturbance discovered at once and removed, and all that intense suffering, mutilation and extreme danger to which the patient was subjected, might have been avoided.

There is no portion of the living body so subject or so liable to varied and numerous diseases as the maxillary bones, and there is no part of the system that exercises so great an influence over the rest of the body, either in health or disease, as the oral cavity. This will appear the more apparent when we reflect on the many protecting canals these bones give to a vascular and nervous apparatus, more complicated in structure, and sustaining a greater degree of organic activity than any other portion of the living skeleton.

The presence in the jaws of those dental organisms which undergo successive evolutions, beginning in early foetal life, and ceasing only with the death of the individual, is a constant cause of congestion or disturbance, the duration or intensity of which is in proportion to the difficulties and irregularities of their development. There are also morbid conditions of the teeth that are very obscure and difficult of diagnosis, but are none the less potent in their influence to produce persistent and extensive nervous disturbance. I refer to exostosis of the fangs, and the formation of calcific nodules in the pulp cavity of the teeth, and to these may be added all those morbid changes to which the tooth substance is liable during the various phases of its growth. The mucous membrane lining the mouth is of considerable thickness, containing numerous glands, and is covered with many tiers of tessellated cells, into the deep surface of which sensitive and vascular papillæ project from the membrane itself. It is divided by the alveoli and teeth into an inner and outward space, and forms an elastic and dilatable sack; within this the rows of teeth can be separated from each other with the lips closed, and much further when the mouth is opened; it is reflected on the outer surface of the bone and ends on the edges of the alveoli as gum. It is so elastic, that when the mouth is open to its widest extent it is capable of further extension, whilst, when the mouth is closed it presents no folds. It is clear that as soon as the elasticity of this dilatable sack on either side is impaired, the mobility of the jaw ceases. It is the vestibule of the alimentary canal, and within the radius of a few inches of this cavity all the special nerves are clustered. Nowhere in the human body is the sense of touch so exquisitely developed as in the ruddy lips and flexible tongue; the palate and the tongue monopolize the sense of taste, and the sense of smell stands as an advanced guard to reject all improper food before the lips, tongue or palate come in contact with it. Three special sentinels who are constantly employed in discriminating between suitable and unsuitable substances.

Protected as the mouth is from the intrusion of injurious substances, it nevertheless contains within its own walls all the elements



necessary for the destruction of its own tissues ; the secretions of the mouth, even when in a healthy condition, uniting with the food in the process of mastication, form compounds, the residuum of which if allowed to remain in the many interstices present in the oral cavity, destroy the continuity of the teeth. This disintegration of tooth substance when once commenced and allowed to go unchecked increases in geometrical ratio at each successive step, compounding and recompounding destructive elements until the soft tissues of the mouth become involved.

In all civilized communities sanitary laws with sanitary boards to enforce them are deemed indispensable for the general good ; for it is a well established fact that emanations from decomposing matter produce pestilence, by polluting the atmosphere. If this is true of districts and communities, how shall we estimate the injury done to the system of an individual who at every inspiration carries to his lungs the poisonous emanations from the decomposing processes constantly present in a neglected or uncleanly mouth ? In the practice of climatic therapeutics, how irrational that physician would be considered who would send his patient to a mountainous district for pure, fresh air, with a mouth containing as much disease and death as the fabled box of Pandora. It is very clear that in all low forms of fever and in saturnismus, sordes should not be permitted to form, and the mouth should be kept scrupulously clean by the constant use of proper collutoria. It is of the utmost importance in the treatment of syphilis and syphiloid diseases that the hygiene of the mouth receive special attention, for lesions of the throat and mouth present some of the most obstinate forms of these diseases ; all crenated teeth should be made smooth, fangs of teeth extracted ; salivary calculi removed ; and decayed teeth filled. If the patient is to undergo a long course of mercurial treatment, the teeth should be filled with a non-metallic substance, as any of the metals used in filling teeth would amalgamate more or less with the mercury taken into the system. After recovery the temporary non-metallic fillings should be removed and permanent gold fillings substituted. If these precautions are observed, the patient will escape much painful annoyance during the presence of mucous patches, the disease will be easier controlled and will yield more easily to the influence of remedies.

There are few tumors or other affections of the gums that come under the observation of the general surgeon or physician, except those extreme cases that have been growing for years, and have assumed a malignant form ; nevertheless, warty and vascular tumors, polypus, epulis and hypertrophy of the gums are frequently seen by

the dentist long before the patient is aware of their existence, and can be treated or removed by him with little inconvenience.

These tumors are never present, even in an incipient stage, in a clean mouth, and where they are early extirpated, and the mouth restored to a cleanly condition, they show no tendency to return. The history of these tumors agrees with their histology—recurring locally as long as the circumstances under which they arose are maintained, and destroyed by the removal of their local nidus, and never infecting the system.

In all cases of fracture of the lower jaw, either simple, compound or comminuted, and especially in those cases where the teeth are lost or the antagonism bad, the case becomes further complicated, and an interdental splint is absolutely necessary to secure a good result. From these considerations it will be seen that the dentist is as intimately connected with the science of medicine as any other specialist, and his services can be called into requisition oftener, and be made a more valuable auxiliary to the general practitioner than any other specialist.

Much has been written and said in regard to the mechanical character of dentistry; a great deal of this is true; for to be a good dentist, one must not only understand the laws of mechanics, but must use them. His mechanical ingenuity is constantly at its utmost tension in his daily practice, and if there is any latent genius for the fine arts in his composition, I know of no better place to improve or test it than in constructing and adapting a full set of teeth for the human mouth.

The construction of artificial teeth requires more skill than the mere artisan or mechanic possesses. Such operations to be performed successfully and safely, must be preceded by a thorough knowledge of the parts, and of the material employed; and this knowledge can only be acquired by a professional education. An acquaintance with the principles and practice of medicine is necessary to prepare the mouth, and to determine when it is in a proper condition to receive the artificial work. In the adaptation of artificial teeth we have to deal with living structures, and ignorance on the part of the specialist of the region of the body to which his treatment is confined is to the highest degree culpable, and should under no circumstance be tolerated. There are other qualifications requisite in the construction of substitutes to supply the loss of the natural teeth, which tax the artistic skill of the dentist to no inconsiderable extent, I refer to that judgment necessary to a proper selection and arrangement of the teeth so as to preserve or restore the expression of the features. The form and character of the teeth in relation to



the temperaments, as well as each individual tooth, must be considered; the length, color and size, and the length of the teeth properly divided between the upper and lower set, with a consistent irregularity in the arch.

The horizontal line, or line of occlusion, between the upper and lower set should be slightly irregular, so as not to present the appearance of a partly separated smooth-edged bivalve, when the mouth is perceptibly opened. I am aware that there are cases which defy the best skill of the dentist to restore that harmony which is so necessary to a pleasing expression of feature; for when all the teeth are lost in early life, and absorption of the alveoli becomes complete, the principal muscles of expression become detached from their origin and insertion, producing that expressionless, flaccid and emaciated appearance, so noticeable in old age; so that the dentist who extracts a tooth where there is the remotest hope for its preservation, inflicts on his patient an irreparable injury.

It is not our fault if hundreds of unprofessional men have mechanically attached themselves to our profession as they have to other professions, like barnacles to the hull of an ocean steamer, and created in certain quarters a competition for cheapness rather than for excellence. The introduction of rubber or celluloid as a base for artificial teeth, and the use of anæsthetics as an auxiliary in the extraction of teeth, has opened the door of abomination, and let loose upon the world legions of charlatans, as it were, to mutilate the face of nature.

The intrusion of these inexpensive materials as a base for artificial teeth, circumscribed as they are in durability and utility, is a great blessing to persons of limited means who have lost their teeth, and the use of anæsthetics in serious surgical operations which are always of a painful nature, produces the most beneficial results, and is without doubt one of the greatest boons to suffering humanity known to the science of medicine. That the use of anæsthetics should be abused and offered as an inducement for persons to part with their natural teeth, and that cheap artificial teeth should be advertised and held up as an additional temptation, is without doubt most culpable, and must receive the condemnation of every honest thinking person.

If the patient is unable to pay the fees necessary to compensate the operator for his time and the best material used in saving the natural teeth, the operator will, if he be an honest man, divide the burden of expense with his patient rather than use an inferior material, or deprive his patient of his natural teeth in order to furnish others less expensive. The demand for cheap artificial teeth has

been supplemented by an equal demand for cheap filling material, and it is no uncommon occurrence for persons who enjoy the expensive luxury of wearing diamond jewelry to request their dentist to use cheap material in treating their teeth. The milliner, tailor, dressmaker and jeweler are patronized to the fullest extent, for with the majority of mankind external adornment is of the first and most vital importance. Most people who visit a dental office for the first time, do so for the same reason that they call on a physician, when they are in trouble, for they never think of defective teeth or a diseased condition of the mouth until they suffer pain or inconvenience. To visit a dental office for the first time without being driven there by dire necessity, or consult a dentist in regard to the condition of children's teeth before the household has been disturbed by their cries, require a great advance in civilization, or at least a higher appreciation of the science of dentistry than falls to the lot of even intelligent people. These statements will appear more clearly when we consider the four principal duties of the dental profession.

The first and most important duty of a skillful dentist is to prevent decay. The second, is to stop or arrest decay. The third, to remove offensive teeth from the jaws, and bring the mouth into a healthy condition, and the fourth, and last care, to replace the lost teeth by artificial means.





